

THE IDENTITY OF ANYCHIA DICHOTOMA.

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THE genus *Anychia* contains two easily recognizable although often confused species, both of which grow in New England. One of these, with fastigiately branched puberulent stems, lance-linear leaves, and numerous sessile flowers, has long passed as *A. dichotoma*, Michx. The other, with more diffuse branching, elliptical leaves, and pedicillate flowers scattered in the forks, has according to varying ideas of specific lines and nomenclatorial principles been called *A. capillacea*, DC., *A. dichotoma*, var. *capillacea*, Torr., and *A. canadensis*, Britt., Sterns, & Poggenb. While recently in Paris, Mr. M. L. Fernald had an opportunity to examine the type specimen of Michaux's *A. dichotoma* and found it to be not, as generally supposed, the puberulent plant so called, but the glabrous diffuse one later characterized as *A. capillacea*. Mr. Fernald forwarded to the Gray Herbarium an excellent photograph of the type together with some notes and the suggestion that the literature of the two species should be re-examined in the light of this interesting discovery. When in London some weeks later Mr. Fernald also examined the extant specimen of the Linnaean *Queria canadensis*, and found it likewise to be the glabrous diffusely branched plant, and thus identical with the type of Michaux's *A. dichotoma*.

On turning to a copy of Michaux's Flora, long ago annotated by Dr. Gray, I find that he also had noticed the real identity of the Michauxian plant, as he had penciled the words "the capillacea" against the description of *A. dichotoma*. His note, however, was made at a time when in the broader interpretation of species, *A. capillacea* was regarded a mere form of *A. dichotoma*. Presumably for this reason he never published any mention of his observation on the type at the Jardin des Plantes.

It has long been clear, however, that our two *Anychias* are distinct species and it is a matter of interest to learn that Michaux's name *A. dichotoma* has been applied to the wrong one. In the light of the new information now at hand it will be necessary to change the names now current. Concerning the smooth diffusely branched plant, there can be no question. To those who use the first correct combination it must hereafter be *A. dichotoma*, Michx. Those, who

on the other hand prefer the earliest specific name, may continue to call the plant *A. canadensis*, Britt., Sterns, & Poggenb.

Concerning the other plant, namely the one with puberulent stems, the difficulty is greater. The only available names found in literature appear to be several of Rafinesque's, who in the *Atlantic Journal*¹ and *New Flora*² characterized no less than six species of *Anychia*, prefacing his treatment of the group in the latter publication by the following characteristic remarks: "The plants of this G[enus] and others akin forming a small natural group, have been blended with the G[enera] *Queria*, *Paronychia*, *Achyranthus* &c., their synonymy and sp[ecies] are in utter confusion. Having shown to Torrey 4 sp[ecies] widely different in habit, leaves and flowers! he pronounced them all varieties of *Queria canadensis*! They require as yet a monograph, and must be divided into 2 or 3 Genera by the stamens, that must all be examined again, since Michaux and Nuttall[1] differ about them. I regret that I did not examine all mine when met alive. Meantime I will divide them into 3 subgenera or Genera, and add some new species." *A. nudiflora*, Raf., is described as smooth and may be excluded from consideration on this ground. The other five, namely, *A. polygonoides*, *fastigiata*, *conferta*, *lateralis*, and *divaricata*, are all said to be puberulent or pubescent. Of these, the first published (if priority of position as well as of time be regarded) was *A. polygonoides*, which was characterized¹ as follows: "Stem dichotomous, lax, erect, puberulent; leaves patent, linear cuneate, acute, nearly smooth, stipules lanceolate; flowers solitary in dichotomy, subpedicellate, erect. From the mountains Alleghany, and estival like the three following [*A. fastigiata*, *conferta*, and *lateralis*], six inches high."

Every part of this description corresponds to the more loosely branched specimens of our puberulent-stemmed plant, and there can be no serious doubt that *A. polygonoides*, Raf., was what has long passed as *A. dichotoma*. Further proof, however, is to be found in a subsequent note³ by Rafinesque, in which he states that his *A. polygonoides* is "*A. canadensis* of Nuttall and most of our botanists." This is significant, for at that time Nuttall, Torrey, De Candolle, and others had all mistaken the puberulent-stemmed plant for *Queria canadensis* of L. and *A. dichotoma* of Michaux., separating

¹ *Atlantic Journal*, i. 16 (1832). ² *New Flora*, iv. 41-43 (1836).

³ *New Flora*, iv. 43.

from it as a variety or independent species the smooth-stemmed and broader-leaved *A. capillacea*, DC. That Rafinesque himself had a correct knowledge of these plants is shown by his further remark¹ that "The *A. capillaris* N[uttall] is the real *A. dichotoma*, of Mx. quite distinct by broad leaves elliptic, stem filiform smooth."

The only points in the description of *A. polygonoides*, which can raise any question, are the lax branching and subpedicellate flowers, but it must be remembered that Rafinesque employed these expressions only in a comparative way while endeavoring to separate several forms of the same plant, all regarded by Dr. Torrey as *Queria canadensis*. Fortunately authentic specimens of Rafinesque's *Anychias* were preserved in the Torrey Herbarium, and we have recent and critical authority in Dr. Britton's notes on the genus² for regarding *A. polygonoides*, Raf., as identical with the puberulent plant.

The species of *Anychia* should therefore stand as follows. As from habital similarity they have been much confused, it seems best to cite specimens as well as synonymy pretty fully.

A. DICHOTOMA, Michx. Stem filiform, glabrous: leaves elliptical, thin: inflorescence diffuse; flowers distinctly pedicellate. — Fl. Bor.-Am. i. 113 (1803); Raf. New Fl. iv. 43. *Queria canadensis*, L. Sp. 90 (1753). *Q. dichotoma*, Moench, Meth. 351 (1794). *Q. capillacea*, Nutt. Gen. i. 159 (1818). *Q. canadensis*, var. *capillacea*, Eaton, Man. ed. 4, 422 (1824). *Q. canadensis*, var. *capillaris*, Britton, Bull. Torr. Bot. Club, xiii. 187 (1886). *Anychia dichotoma*, var. *capillacea*, Eaton, Man. ed. 6, 295 (1833). *A. capillacea*, DC. Prodr. iii. 369 (1828); Redfield, Bull. Torr. Bot. Club, vi. 61; Britton, *ibid.* xiii. 187; Wats. & Coult. in Gray, Man. ed. 6, 426. *A. capillaris*, Raf. (by clerical error), New Fl. iv. 43. *A. filiformis*, Raf. acc. to Britton, l. c. *A. canadensis*, Britt., Sterns, & Poggenb. Prelim. Cat. N. Y. 44 (1888); Britt. & Brown, Ill. Fl. ii. 40; Britt. Man. 405.— NEW HAMPSHIRE: Nottingham, 20 July, 1900, *A. A. Eaton*. VERMONT: Bellows Falls, 22 Aug. 1902, *Blanchard*; Pownal, 23 July, 1898, *Eggleston*; North Pownal, 11 Aug. 1902, *Blanchard*. MASSACHUSETTS: Danvers, 5 July, 1896, *Sears*; Melrose, 27 Sept. 1882, *Perkins*; on gravel, Pine Hill, Middlesex Fells, 21 July, 1895, *Charles Eliot*; Medford, 3 Aug. 1878, *Perkins*; damp rocky woods, Woburn, 28 July, 1895, *Rich*; sandy soil, Cambridge, 11 Sept. 1891, *Fernald*; on Snake Hill, Waltham, 13 Aug. 1866, *W. Boott*; Blue Hills Reservation, 11 Aug. 1894, *Manning*; roadside in shade, Sharon, 12 July, 1896, *Williams*; Highland Grove, Walpole, 20 Aug. 1878, *Young*. RHODE ISLAND: *Thurber*; Diamond Hill,

¹ New Fl. iv. 43.

² Bull. Torr. Bot. Club, xiii. 187.

20 Sept. 1884, *W. W. Bailey*. CONNECTICUT: in shade, not rare, Southington, *Andrews*, no. 797; woods, Southington, 15 Aug. 1901, *Bissell*; Pomfret, 4 July, 1901, *Driggs*. NEW YORK: Staten Island, 1855, *Thurber*. PENNSYLVANIA: Lancaster near Binkley's Bridge, 6 Sept. 1901, *Heller*; Allegheny, in hilly woods, *Ziegler*. DISTRICT OF COLUMBIA: wooded hillsides near Washington, 30 Jun. & 16 July, 1896, *Steele*. MARYLAND: in hb. Gray without locality. VIRGINIA: along the New River, Blue Bridge, 12 July, 1892, *Small*; Stony Man Mountain, *Steele*, no. 73. NORTH CAROLINA: Asheville, *Robinson*, no. 32; dry slopes, Buncombe County, *Biltmore distribution*, no. 5419a. KENTUCKY: Harlan Court House, *Kearney*, no. 10. OHIO: Perkins, 8 July, 1895, *Moseley*. ONTARIO: Essex County, 1891, *Dearness*; Leamington, 30 July, 1892, *Macoun*. ILLINOIS: Lansing, *A. Chase*, no. 863; Rock River, *Bebb*. MINNESOTA: on red bluffs of the upper Des Moines River, *Geyer*.

A. POLYGONOIDES, Raf. Stem puberulent: leaves lance-linear, of firmer texture: inflorescence lax to fastigate; flowers scarcely or not at all pedicelled.—*Atl. Journ.* i. 16 (1832). *A. canadensis*, Ell. *Sk.* i. 307 (1817), as to pl. descr. but not as to syn. *Queria canadensis*. *A. dichotoma*, DC. *Prodr.* iii. 369; Torr. & Gray, *Fl.* i. 172; Gray, *Man.* eds. 1–6; Britton, *Bull. Torr. Bot. Club*, xiii. 186; Britt. & Brown, *Ill. Fl.* ii. 40; Britton, *Man.* 405; not Michx. *Queria canadensis*, Nutt. *Gen.* i. 158 (1818). *A. fastigiata, conferta, & lateralis*, Raf. *Atl. Journ.* i. 16 (1832), from char. and acc. to Britton, *Bull. Torr. Bot. Club*, xiii. 187. ?*A. divaricata*, Raf. *New Fl.* iv. 42 (1836). *Paronychia canadensis*, Wood, *Bot. and Flor.* 58 (1870). — MASSACHUSETTS: Danvers, 14 Aug. 1887, *Sears*; W. Quincy, on wood roads, 11 Sept., 1894, *Rich*; road east of Great Dome, Blue Hills, *Manning*. CONNECTICUT: on railroad track, Norwalk, 6 Aug. 1894, *Averill*. PENNSYLVANIA: roadsides near the Delaware Water Gap, Oct. 1867, *C. F. Austin*; Safe Harbor, *Heller & Halbach*, no. 656; Allegheny, 21 July, 1889, *Ziegler*. DISTRICT OF COLUMBIA: Washington and vicinity, 17 Sept. 1896, *Steele*. VIRGINIA: Bedford County, 11 July, 1871, *Curtiss*; Massanuttin Mountain, *Heller & Halbach*, no. 1090; Stony Man Mountain, 30 Aug. 1901, *Steele*, nos. 72, 242. NORTH CAROLINA: Cullowhee, 1887, *Thaxter*; Asheville, *Robinson*, no. 30. FLORIDA: brackish shores, Duval County, *Curtiss*, no. 337 (form with exceedingly short puberulence, the sepals more conspicuously ciliated). ALABAMA: ex herb. J. Torrey; dry rich soil, 1858, ex herb. Dr. Short. TENNESSEE: upon woods, Henderson, *Bain*, no. 239. KENTUCKY: Poor Fork, *Kearney*, no. 198. OHIO: Oxford, 6 Aug. 1895, *Moseley*. ILLINOIS: Mt. Carmel, 1875, *Dr. Schneck*. ARKANSAS: sandy fields, *Harvey*, no. 16. KANSAS: open woods, Cherokee County, *Hitchcock*, no. 801. TEXAS: Dallas, June, 1873, *Reverchon*. ARIZONA (or New Mexico): *S. B. Parish*, no. 310.